



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

In this way the clause has been interpreted by the Congress, and law was passed at the first session, providing for the trial by jury in all cases of prosecution for libel. The system has not yet been applied to any other case ; but many will be of opinion, that ' the advantages of the institution are well understood ' already, when it is stated, that in every prosecution for a libel, which has yet occurred in the republic, *the prisoner has been acquitted.*

ART. VI.—*A Manual of Chemistry, on the Basis of Professor Brande's ; containing the principal Facts of the Science, arranged in the Order in which they are discussed and illustrated in the Lectures at Harvard University, N. E. Compiled from the works of Brande, Henry, Berzelius, Thomson, and others. Designed as a Text Book, for the use of Students and Persons attending Lectures on Chemistry.* By JOHN W. WEBSTER, M. D. Lecturer on Chemistry in Harvard University. 8vo. pp. 603. Boston. 1826. Richardson & Lord.

THE multiplication of treatises on chemistry, within a few years, has been remarkable, both in Europe and in our own country. Not only have many new works appeared, but new editions of the standard works have been sent out with great rapidity ; and the student is not a little embarrassed in his choice of those, upon which he shall first fix his attention. While this increase of chemical works is an evidence of increased attention to the science, it further shows what quick advances have been made, and are still making in it. And this demand for new works, and new editions of the same work, is a consequence of rapid discoveries and improvements, no less than of the increasing attention bestowed on those arts of life, which involve chemical principles, and which are advancing towards perfection, in the same path as the science upon which they are founded. There is no science in which more frequent and important discoveries are making than in this, and none in which the revision of former opinions is so often demanded ; bearing, as they do, on the arts of life and wants of the community. With the enlargement

of our manufactures, an enlarged demand for chemical knowledge is strongly felt, and no nation can be expected to excel in many of the arts, or to increase in wealth and power, or to avail itself of the discoveries made in other nations, which does not consider chemistry an essential branch of education. The connexion between science and the arts, and their influence on the commercial prospects of nations, have been so often dwelt upon, as to make it unnecessary for us to attempt to offer any new views of the subject.

It is given to but a few great minds to make brilliant discoveries, and comparatively few persons in Europe, and still fewer in this country, have the means or facilities of prosecuting any branch of experimental science to the extent they may desire. This remark applies with force to the science of chemistry, as in the extensive researches which it requires, a great expenditure of time and money must be provided for. It becomes important, therefore, that those who have abundant means, should contract a taste for such arts and sciences, as are most conducive to the morality and wellbeing of the people. Chemistry and mechanical philosophy, when made objects of pursuit and interest to the less informed classes of mankind, cannot but powerfully conduce to benefit the morals, and to enlighten and strengthen the understanding. In their elementary principles, and still more in their advanced state, aided by the countenance and influence of the wealthy, the physical sciences must always help in extending and improving the mental energies of the people, and be made a source of amusement, happiness, and profitable exertion. And with such encouragements as these, not only will the improvements in the arts and sciences be preserved, but their influence upon the public welfare will be augmented by valuable discoveries.

The arts connected with our luxuries, pleasures, and amusements, are subject to fluctuation, from the change of our tastes, our love of variety, our varied degrees of mental power, and other causes. Painting, poetry, music, and their sister arts have had their alternations of rise and fall; but the physical sciences have gradually and steadily advanced, and whatever differences may exist in their degrees of perfection in different countries, no one will hesitate to admit, that this kind of learning is constantly improving. The prediction of Seneca may yet be often fulfilled in its figurative as it has been in its literal sense.

Venient annis sæcula series
Quibus Oceanus vincla rerum
Laxet, et ingens pateat Tellus ;
Tethysque novos detegat orbes,
Nec sit terris ultima Thule !

The knowledge of chemistry has been obtained by the gradual accumulation of discoveries, and by unwearied experiment and observation. If we look at the luminaries of chemical science in Europe, to which it is indebted for its late rapid and brilliant career, we shall find some dozen or twenty votaries, who are blessed with ample facilities, arising from fortune or situation. The discoveries of such men are immediately transferred to public journals, and communicated to learned societies, and it is not to them that we are to look for volumes, embodying all that has been done by themselves and others. Occasionally, indeed, it happens, that they possess the requisite patience, and are willing to devote their time to an arrangement of the newly discovered facts, and we are favored with a systematic work. But the great mass of chemical works, which have appeared within a few years, is composed of those less aspiring productions, which, however well prepared, are of little further use, than to afford an introduction to the more elaborate treatises. Too many of them, which are avowedly 'school books,' are imperfect, and quite unfit for their intended use. The discoveries of the distinguished votaries of the science, being dispersed, as we have said, through many books, he, who can devote the necessary time and talents to the task of collecting and combining them in a practical treatise, suited to general use, deserves the thanks of the community hardly less than the original discoverer. Whoever does this with impartiality and candor, will be ready to acknowledge the sources whence he has drawn, and to arrogate to himself nothing, which belongs to another. We have now before us a valuable work, in which this regard to the rights of others has been strangely lost sight of, a work especially designed for medical students, and reprinted in this country. It is Dr Paris's Medical Chemistry ; the greater part of this volume is copied *verbatim* from Henry and Brande, yet no other acknowledgement is made than this ; 'There are three works, which every student should possess, Henry's Elements of Chemistry, Brande's Manual, and Dr Ure's Chemical Dictionary.' (*Preface*, p. xvi. *Lond. Edit.*) Dr Ure has also been unmindful of the golden rule, and in the

additions which he has made to Nicholson's Dictionary, has given many translations from Thenard, without acknowledgement, and in such a manner as to make the reader believe they are his own.

Notwithstanding the many chemical works, which have appeared within the last twenty years, very few, if any, are well calculated for such students, as have gone through the limited works, with which they usually commence the study. Between the 'Conversations on Chemistry' and similar elementary treatises, and the more elaborate works of Henry, a chasm has existed, which it has long been desirable to have filled. The manual of Mr Brande is in many respects such a work, as is calculated to supply the connecting link in the chain; but it is still deficient in experiments, and in the description of the salts, while it contains much that is out of place in a treatise on chemistry, and that belongs to a distinct branch of science.

The edition of Brande's work, published some years since, under the care of Dr Macneven, has some advantage over the English edition, but its general character is retained.

The Manual now under notice is precisely what was wanted. It fills up the chasm alluded to above, and leads the student with ease and interest to the study of the more voluminous systems. The Chemistry of Dr Henry, which has been used in several of our colleges, is undoubtedly one of the most valuable we possess, but from a single volume it has increased, in ten editions, to a system extending, in the American edition, to no less than three volumes. It has, of course, gradually become expensive, while at the same time it contains much, that is not calculated for any but practical chemists, or not used except for occasional reference. Such are the various tables, the description of the methods of detecting poisons and adulterations, the details of analytical processes, all of which, though extremely valuable and useful to the professed chemist, are not of a nature to be studied by the majority of students and persons attending chemical lectures. Accordingly, in Dr Webster's volume, these subjects are but slightly touched upon; they are to be published, as we learn from the Preface, in a separate volume. This plan is judicious, and a useful book will thus be furnished to practical chemists, manufacturers, and others. A volume on chemical analysis is much wanted, which shall comprise the most improved processes, that modern chemistry has discovered, and which are now to be sought for through a great number of vol-

umes. We would suggest to Dr Webster the propriety of introducing a chapter on the Use of the Blowpipe, which would render his proposed volume doubly welcome to mineralogists, as well as chemists.

Mr Brande's Manual, which Dr Webster has adopted as the basis of the present volume, is, as before hinted, one of the best elementary works, that has been published; but its value has always been considered much less than it might have been, in consequence of the conciseness of the descriptions of the different substances, and of the processes. Its size has at the same time been increased, by the introduction of much matter, that was really not wanted by beginners, and by engrafting upon it the description of a great many minerals, too concise to give any useful information to students of mineralogy, and of less use to the chemist. Mr Brande also filled a large number of pages with the substance of his lectures on geology, quite out of place in a system of chemistry. All these Dr Webster has very judiciously omitted, retaining, however, all the strictly chemical part of Mr Brande's work.

To the chapter on Attraction, as contained in Mr Brande's Manual, Dr Webster has made several important additions, especially to that part which relates to the atomic theory, and the peculiar views of Mr Dalton. One of the simplest and best explanations of this theory, we recollect to have seen, is in a note to a review of Henry's Chemistry, in the sixteenth volume of the Quarterly Journal of Science, page 336. The addition of many beautiful experiments and illustrations greatly enhance the value and interest of this chapter. The prevailing defect of most chemical works, especially of those designed for students, is in the details of experiments.

Among the additions to the chapter on Caloric, we notice a description of the ingenious pyrometer of Mr Daniell, and the excellent practical directions for the construction of thermometers. There is also introduced a description of the iodous acid of M. Sementini, and the remarks of Dr Henry on the nature of this very curious substance.

The chapter on Hydrogen contains numerous additions, among which we notice the account of the new blowpipe of Mr Gurney, and that of Dr Hare, neither of which is mentioned by Brande. The experiments on the composition and decomposition of water are fuller, than those of Brande. In the specific gravity of hydrogen, and in most other cases, Dr Webster has

adopted the numbers deducible from the latest experiments, and hence many deviations have been necessarily made from those given by Brande. The compiler has, throughout the book, shown himself familiar with the best chemical works, and a careful observer of the progress of chemical science. He has given the results of a great many new experiments, and especially those of Berzelius and the French chemists. We should extend this notice to an undue length, were we to enumerate all the additions to Mr Brande, and deviations from him, which Dr Webster's work exhibits. We must content ourselves with remarking, that, on comparing many pages with Mr Brande's, we find the latter have in most cases been almost rewritten, and made to conform to later experiments and discoveries. This is an evidence of the labor bestowed on the work, which will render it peculiarly acceptable to chemists in general.

Our scientific readers will be pleased to learn, that in this work is the fullest account of the curious discoveries of Döbereiner, of the action of spongy platinum upon hydrogen and oxygen gases, which has yet appeared in English, and that Dr Webster has given an abstract of the experiments of Dulong and Thenard on this interesting subject, from their memoirs in the *Annales de Chimie*. Although these experiments have not, as yet, led to any satisfactory explanation of the phenomena, they have developed some new and highly curious properties of several of the metals, and induced the belief in the minds of the experimenters, that, among the gases, some have a tendency to unite under the influence of the metals, while others have a tendency to separate, and that this property varies with the nature of both.

In the description of the various chemical compounds used in medicine, Dr Webster has made a constant reference to the United States' Pharmacopœia, and has described the best processes, thus rendering his volume a valuable companion to that national work, and an important accession to a part of the community, where an increased knowledge of chemistry is imperiously demanded. It is to be hoped, that the establishment of the College of Pharmacy in our city, will be attended with the happiest effects, and that our apothecaries, like those of Great Britain, will, before many years, produce some distinguished cultivators of that science, on which all their operations are founded, and which has such an important influence on the health of the community.

On the whole, we think this may rank among the very best works on chemistry, for the purposes for which it is designed, and that the scientific community is in no slight degree indebted to the gentleman, who has devoted the time, left from the arduous duties of his office, to this task. In connexion with the works of Professor Farrar, the present publication renders complete the series of text books on the physical sciences, which have emanated from Harvard University; and these reflect no less honor on the industry and talents of their authors, than on the institution with which they are connected.

ART. VII.—*Recollections of the Last Ten Years, passed in occasional Residences and Journeyings in the Valley of the Mississippi, from Pittsburg and the Missouri to the Gulf of Mexico, and from Florida to the Spanish Frontier; in a Series of Letters to the Rev. James Flint, of Salem, Massachusetts.* By TIMOTHY FLINT, Principal of the Seminary of Rapide, Louisiana. 8vo. pp. 395. Boston. Cummings, Hilliard, & Co.

THIS volume has been perused by us with great pleasure, and with much respect for the writer's talents and character. We have risen from it, indeed with a stronger sympathy, than we should wish to have occasion to feel with the author, in the hardships and sufferings endured by him and his family; with more vivid conceptions than we before possessed, of the peculiar aspect of the grand and beautiful features of the country he describes; with more enlarged views of its natural resources, of the extent and progress of its population; and with more favorable impressions of the general character of our fellow citizens of those vast and fertile regions, that border upon the Mississippi, and its mighty tributary streams from the east and the west.

That wide portion of our country, which is somewhat vaguely denominated 'the Valley of the Mississippi,' is daily growing in importance and interest. It presents a fruitful theme of anxious contemplation and prophetic conjecture to the statesman and philanthropist, as the destined theatre of future events and exhibitions of human character, of the most solemn import to the